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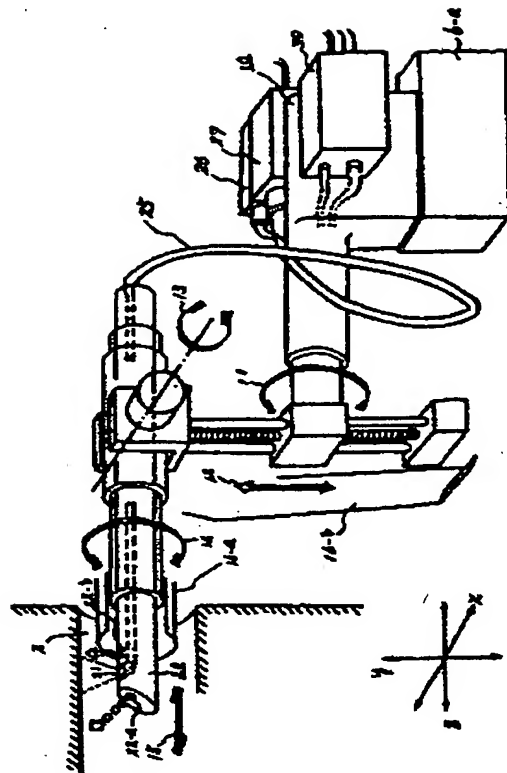
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APPLICANT : HITACHI LTD;

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TITLE : INSPECTOR FOR TUBULAR BODY



ABSTRACT : PURPOSE: To make it possible to visually inspect many kinds of pipes by a remote operation with the use of a single device by giving five degrees of freedom to an inspecting head and arranging an approach sensor so that the inspecting head is remotely operated by a control device.

CONSTITUTION: Five degrees of freedom are afforded by a feed axis 15 for moving an inspecting head 20 along a piping axis, an axis 14 for turning the head 20, a rocking axis 13 for changing the angle of inclination of a portion including the axes 14 and 15, an axis 12 for extending and contracting the foregoing portions, and an axis 11 for turning all of the foregoing portions. There are arranged on the inspecting head 20 at the leading end a video optical system for illuminating an object surface to receive the video image and two approach sensors 22a and 22b for detecting the relative distance between the inspecting head and the object surface. The input from the video optical system is transmitted through an image guide to an ITV27 and is fed to a remote TV monitor. A controller actuates the respective axes through an inspecting mechanism 10 in such a preset operating sequence as is programmed in advance so that the indexing signals of the respective axes are compensated for the inspection in response to the output of the approach sensors 22.

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